

Claims

- [c1] 1. A liquid crystal panel, comprising:
a panel, having a plurality of pixels, wherein each one of the pixels includes a first transistor and a second transistor;
a first group of gate lines, coupled to each the first transistor at a gate electrode;
a second group of gate lines, coupled to each the second transistor at a gate electrode; and
a first group of source lines,
wherein one of the first group of gate lines and the second group of gate lines can be used to feed with gate pulse signals with respect to an actual image data and the other one can be used to with gate pulse signals with respect to a black image data.
- [c2] 2. The liquid crystal panel of claim 1, wherein the gate pulse signals are fed by a time difference to the first group of gate lines and the second group of gate lines.
- [c3] 3. The liquid crystal panel of claim 1, wherein input terminals of the first group of gate lines and the second group of gate lines are located at the same side or at the different sides of the panel.

- [c4] 4. The liquid crystal panel of claim 1, wherein the first group of source lines can be fed with the actual image data.
- [c5] 5. The liquid crystal panel of claim 1, wherein drain electrodes of the first transistor and the second transistor are coupled to a terminal of a capacitor.
- [c6] 6. The liquid crystal panel of claim 1, further comprising: a second group of source lines, wherein one of the first group of source lines and the second group of source lines can be fed with the actual image data, and the other one can be fed with the black image data.
- [c7] 7. The liquid crystal panel of claim 6, wherein the actual image data and the black image data are fed by a time difference.
- [c8] 8. The liquid crystal panel of claim 6, wherein drain electrodes of the first transistor and the second transistor are coupled to a terminal of a capacitor.
- [c9] 9. A driving device for a liquid crystal display (LCD) panel, the driving device comprising:
a liquid crystal (LC) panel;
a first gate driver, having a first gate circuit, coupled to

the LC panel;

a second gate driver, having a second gate circuit, coupled to the LC panel; and

a first source driver, having a first source circuit, coupled to the LC panel,

wherein one of the first gate circuit and the second gate circuit can be fed with a gate pulse signal with respect to an actual image data, and the other one can be fed with a gate pulse signal with respect to a black image data.

[c10] 10. The driving device of claim 9, wherein the gate pulse signals are fed by a time difference to the first gate circuit and the second gate circuit.

[c11] 11. The driving device of claim 9, wherein each of the first gate driver and the second gate driver comprises:
a shift register, coupled to receive an input signal;
a level shifter, coupled to the shift register;
an output buffer, coupled to the level shifter and the corresponding gate circuit,
wherein the first gate driver and the second gate driver are located at the same side or at the different sides of the LC panel;
wherein when the first gate driver and the second gate driver are located at the same side, the first gate driver and the second gate driver can be a same one of driver or different drivers.

- [c12] 12. The driving device of claim 9, wherein the first source circuit can be used to feed with the actual image data.
- [c13] 13. The driving device of claim 9, wherein the first source driver comprises:
a digital to analog converter (DAC), coupled to receive a data input; and
an output buffer, coupled to the DAC and the first source circuit.
- [c14] 14. The driving device of claim 9, further comprising:
a second source driver, having a second source circuit, coupled to the LC panel;
wherein one of the first source circuit and the second source circuit can be fed with the actual image data, and the other one can be fed with the black image data.
- [c15] 15. The driving device of claim 14, wherein input time points for the actual image data and the black image data have a time difference.
- [c16] 16. The driving device of claim 14, wherein each of the first source driver and the second source driver comprises:
a digital to analog converter (DAC), coupled to receive a data input; and

an output buffer, coupled to the DAC and the first source circuit,

wherein the first source driver and the second source driver are located at the same side or at the different sides of the LC panel;

wherein when the first source driver and the second source driver are located at the same side, the first source driver and the second source driver can be a same one of driver or different drivers.